

# Arandeira Extract

Blueberry extract in water or saline water

**Arandeira extract** is a nice reddish color liquid based on polyphenols from natural origin with high antimicrobial and antioxidant capacities.



## Composition

Ingredients	EC/CAS
Vaccinium corymbosum extract	924-571-9
Ethyl Lactate	97-64-3
Distilled water	7732-18-5

## Total phenolics index

**430** mg GAE/L extract or **15** mg GAE/ g dw

(milligrams equivalents of Gallic acid per liter of extract or gram of dry weight)

(Testing method: Spectrophotometry; Folin-Ciocalteu)

## Main Polyphenols

**Flavanols:** Catechin, Epicatechin, Epicatechin-gallate

**Flavonols:** Quercetin, Quercetine-3-glucoside (Isoquercetin), Quercetin-3-rutinoside (Rutin), Myricetin

**Phenolic acids and aldehydes:** Gallic Acid, Chlorogenic acid, 2,6-Dihydroxybenzoic acid ( $\gamma$ -Resorcylic acid), Cafeic Acid, Protocatechualdehyde

**Procyanidines:** A2, B1, B2, C1

**Anthocyani(di)ns<sup>1</sup>:** Delphinidin, Cyanidin, Petunidine, Peonidin, Malvidin, Petunidin-3-O-glucoside

(Testing method: LC-MS/MS Analysis)

<sup>1</sup> Free anthocyanins were released from their corresponding sugar derivatives



### Antimicrobial activity

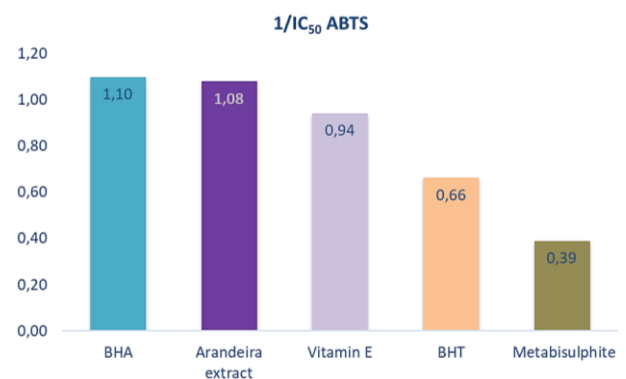
The extract shows antibacterial and antibiofilm activities against multidrug-resistant nosocomial pathogens, such as *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Escherichia coli*, *Enterobacter aerogenes*, *Enterococcus faecium* and *Staphylococcus aureus*

### Antioxidant activity<sup>2</sup>

Relative effectiveness in free radical scavenging activity of the grape marc extracts compared to the common synthetic antioxidants BHT, BHA, metabisulphite and Vitamin E

(Testing method: Spectrophotometry; ABTS)

	Concentration ( $\mu\text{M}$ )
BHA (Butylated hydroxyanisole, E-320)	911
Arandeira extract	930
Vitamin E ( $\alpha$ -Tocopherol, E-307)	1095
BHT (Butylated hydroxytoluene, E-321)	1508
Metabisulphite (E-224)	2570



### Extract Appearance

Nice reddish color liquid, somehow between burgundy and carmine. Odourless. Density (20 °C): 1.093 g/mL. pH =3.60

### Dosage

It is recommended to homogenize **Arandeira extract** in a proportion between 0,5% and up to 5% (v/v) in the final product, depending on its final purpose

### Storage/Handling

Room temperature (< 25 °C/ 77 °F). Refrigeration, protection from light, and excessive heat, recommended for optimal preservation

<sup>2</sup> The data, obtained by calculating the concentration required to neutralize half of the free radicals presents in the medium, provided by the ABTS reagent, show that the relative efficacy is equivalent to BHA, better than Vit E and much better than that of BHT and metabisulphite



## Typical Applications

Can be the basis of formulations with antioxidant and/or preservative purposes in food and feed sectors.

In addition, its bactericidal and/or bacteriostatic activity makes it an excellent option for disinfection of biotic or abiotic surfaces or treatment of diseases of microbial origin in zoosanitary, feed, and veterinary sectors (livestock and pets).

## Advantages

**Arandeira extract** exploits the enormous antioxidant power of the different families of polyphenols that make it up.

**Arandeira extract** combines synergistically the bacteriostatic activity and the microbiocide potency of the different polyphenols found in blueberries against Gram+ and Gram- bacteria being a broad-spectrum antimicrobial.

***The extracts are natural and sustainable.***

## Product Stewardship

**i-Grape** is concerned about the environment and thus our products are made from green and sustainable raw matter – non grading, rejected or bulk fruits or byproducts of blueberry processed foods – that we reutilize to obtain our extracts by a green process.

**i-Grape** strongly encourages its customers to review the extracts properties with the company to make sure the usage they give our products is correct.

*Country of origin: Spain (Galicia, NW)*

## CONTACT INFORMATION

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